

LARIONOV, N.I.
LARIONOV, N.I.

Automatizing the machining of bearing rings. Avt.i trakt.prom.
no.8:46 Ag '57. (MIRA 10:12)

1. Nauchno-issledovatel'skiy institut transporta avtomobil'noy
promyshlennosti.

(Bearing industry)

28(1)

SOV/118-59-4-4/25

AUTHORS: Lysyakov, A.G., Engineer; Preobrazhenskiy, M.A.,
Candidate of Technical Sciences; and Larionov, N.I.,
Engineer

TITLE: Bridge-Type Stacking Cranes

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, 1959,
Nr 4, pp 14-17 (USSR)

ABSTRACT: The design office of the Nauchno-issledovatel'skiy
institut tekhnologii avtomobil'noy promyshlennosti
(Scientific Research Institute of Technology of the
Automobile Industry) has developed, under the super-
vision and with the participation of the Vsesoyuznyy
nauchno-issledovatel'skiy institut pod"ŕmnogo-trans-
portnogo mashinostroyeniya (All-Union Scientific Re-
search Institute of Lifting and Transportation Machine
Building), a bridge-type stacking crane for the semi-
finished product warehouse of the Moskovskiy zavod
malolitrazhnykh avtomobiley (the Moscow Small
Car Plant). Technical characteristics are:

Card 1/2

ARKHIPOV, N.A.; LARIONOV, N.I.

Automatic machine for the manufacture of AKF-2 shell molds.
Avt.prom. 27 no.6:46 Je '61. (MIRA 14:6)

1. Nauchno-issledovatel'skiy tekhnologicheskiy institut
avtomobil'noy promyshlennosti.
(Automobile industry--Equipment and supplies)

^D
LARENCO, N. I.

Chem. & Technol. Sci.

"Investigation of Adiabatic Compressibility of Mixtures With Associated Components."
Sub 25 Dec 51, Moscow Oblast Pedagogical Inst.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 450, 2 May 55.

LARIONOV, N.I.

Measuring velocity of ultrasound in certain water-alcohol mixtures. N. I. Larionov. *Uchenye Zapiski Kazansk. Pedagog. Inst.* 19: 32-37 (1955); *Referat. Zhur.*, Fiz. 1955, No. 14854. -- The diffraction of light on ultrasonic waves was used to measure the velocity of sound in aq. mixts. of MeOH, EtOH, and PrOH in the range of 0.85-100% for frequencies of 3 and 9 Mc. In all mixts. concn. 5% - 100% and the velocity of sound decreased linearly with increase in temp. With low concns. the velocity of sound has a wide concn. max. in all the water-alc. mixts. studied. With 10% alc. there was also a wide temp. max. for the velocity of sound. In the intermediate range, with 20% alc., in a fairly wide range (30-70°), the velocity of sound does not depend on the temp. Adiabatic compressibility of mixts. in the concn. range of 20 to 100% alc. increased approx. linearly with an increase in temp. The relation of compressibility of mixts. to concn. at temps. not over 60° passed through the min. It was noted that the relation of compressibility to concn. in the form $\beta = \beta_0 - a g - b g^2$, which was assumed earlier by Prozorov (cf. *C.A.* 36, 40094) did not agree with the expts. In this formula β is the compressibility of the solvent, g is concn. in % by wt., and a and b are consts. The question of applying the well-known rule of Raoult to water-alc. mixts. was discussed. This rule is expressed by the formula $v^2/4\beta p = R$, where v is the velocity of sound, M is the mol. wt., p is the d., and R is the const. that does not depend on temp. In contrast to pure, unatseed. liquids, in water-alc. mixts. R depends on the temp. and depends linearly on the mean mol. wt. of the mixts. It was suggested that the Raoult const. be used for calcg. the adiabatic compressibility of water-alc. mixts. according to the formula $\beta = M^2/R^2$, where R_1 is the Raoult const., which is detd. from the expression $R_1 = R_0 + 0.13\Delta$ (R_0 is the const. calcd. at $t = 25^\circ$, and Δ is the increase in temp.).
Marijke Ketner

LARIONOV, N. I.

USSR.

Rate of propagation of ultrasonic waves in mixtures with associated components. N. I. Larionov (Pedagog. Inst. Moscow District). *Zhurnal Priklad. Khim.* 27, 1032-12 (1953); cf. Freyer, et al., C.A. 24, 2021; Prozorov and Nondrev, C.A. 33, 90724. The velocity (v) of ultrasonic waves (u.s.w.) in various binary liquid mixts. was measured at several temps. t in an app. (illustrated) in which the wave length of standing u.s.w. of known frequency was deduced from the diffraction pattern produced in a transverse beam of light. The calcd. v of u.s.w. in mixts. of water with varying amts. of MeOH, EtOH, PrOH, BuOH, iso-BuOH, and iso-C₄H₉OH are tabulated and graphed as joint functions of temp. and compn. The equation $v_t = v_0 (1 - \alpha(t - 20))$, where α is the temp. coeff. of v , is in accord with exptl. data. The value of α is tabulated as a function of compn. for each mixt. The values of v_0 in m./sec. and $\alpha \times 10^2$ in (degrees)⁻¹ in that order for the alic. listed, resp., are 1127, 278; 1180, 282; 1202, 284; 1255, 269; 1210, 278; 1250, 268. In all cases of dil. aq. solns. v increased with t to a max., then slowly decreased. In the mixts. MeOH-H₂O at 70°, EtOH-H₂O at 80°, and PrOH-H₂O at 75° v decreased smoothly with increase of alc. concn. and did not pass through a max. J. W. Linnberg, Jr.

LARIENAY, B I USSR.

Adiabatic compressibility of mixtures with associated components. N. I. Larienay (Pelagor Inst. Moscow District). Zh. Fiz. Khim. 46, 1299 (1972); C. Marlin, C.A. 46, 1299c. —The adiabatic compressibility (β) in the temp. interval 10–90° of binary mixts. of water with MeOH, EtOH, PrOH, BuOH, iso-BuOH, and isoamyl alcohol (I) whose alc. concns. were 0–100% were calcd. by means of the phenolformaldehyde tar at pressures up to 3200 kg./sq. cm. and temps. 18–98°. The degree of assocn. can be detd. from the intensity of band 1.68 μ corresponding to OH groups assocd. by a H bond, and band 1.41 μ corresponding to "free" OH groups. A Hilger double spectrophotometer with a PbS cell was used for the expts. The sample was placed under hydraulic pressure in CCl₄; however, since CCl₄ crystallizes at room temp. at 1000 kg./sq. cm., a mixt. of 50% CS₂ and 50% CCl₄ was used at higher pressures. The change of the optical density is $\Delta D = D_0 \Delta T$ and $\Delta D = D_0 \Delta \beta$, where α is the thermal expansion and β the compressibility coeff.; $D = k_2 l$, where k_2 is the absorption per bond of the vol. concn. of bonds, and l the thickness of the sample. For the temps. 20–70° and pressures 1–2000 kg./sq. cm. k_2 is const. The values of $k_2 \times 10^{-3}$ are 2.75, 2.85, 2.8 and 3.0 sq. cm./mol., resp., for PrOH, neryl alc., triethyl alc., and phenol. The concn.-dependent const., k_2 , varies with temp. and pressure; this indicates a change in the no. of H-bridges. Increased pressure has the same effect as decreased temp., decreasing the no. of free OH groups. A change in temp. of 1° corresponds to 90–130 kg./sq. cm. change. The slope of $(\Delta \beta / \Delta T)_P$ is the same as that of $(\Delta \beta / \Delta T)_P$, where T is the crystn. temp.; this indicates that crystn. occurs at equal conditions of mol. interaction.

S. Pakswar

LARIONOV, N. I.

Temperature dependence of adiabatic compressibility of mixtures of associated components. V. E. Nardov and N. I. Larionov (Dokl. Akad. Nauk. SSSR, 1953, 82, 991-994). Adiabatic compressibilities β_a of mixtures of water and MeOH, EtOH, PrⁿOH, BuⁿOH, Bu^tOH, and CH₃COOH are determined by ultrasonic velocity measurements at 10° intervals between 10° and 60° and $\nu = 3 \times 10^4$ and 9×10^4 cycles per sec. For the first three alcohols, mixtures containing 0-100% of alcohol are studied changing the composition by 10% at a time. In remaining cases the investigation is limited to one-liquid-phase regions. For mixtures containing <10% of alcohol β_a passes through a min. (as in pure water) and the min. is displaced towards lower temp. at higher alcohol concn. It is found that mol. velocity U increases linearly with temp. and that it can be calculated from the relation $U = \alpha M - \beta$, where M is the average mol. wt. of the mixture and α and β parameters remaining constant within wide composition ranges. A table of empirically determined α and β parameters is included. S. K. LACHOWIEZ.

LARIONOV, N. I.

PHASE I BOOK KATLOIZATION NOV/1950

24(1)

Nezavisimaya konferentsiya professorov i prepodavateley pedagogicheskikh institutov

Primeneniye ultrazvukov k issledovaniyu veshchestv: trudy konferentsii, Vyp. 7 (Application of Ultrasonics for Analysis of Substances; Transactions of the All-Union Conference of Professors and Teachers of Pedagogical Institutes, Nr 7) Moscow, Izd. MGPI, 1958. 283 p. 1,500 copies printed.

Rech. Ed.: S. P. Zhitoi; Eds.: V. P. Morozov, Professor, and M. B. Rudryavtsev.

FOREWORD: This book is intended for physicists, technicians, aeronautical engineers and other persons concerned with ultrasonics.

CONTENTS: The book contains twenty eight articles which treat ultrasonic phenomena in five general categories: 1) historical data on the development of ultrasonics in the Soviet Union over the past forty years; 2) the speed of sound in suspensions of varying concentration and number and type of components and the relationship between sound velocity and the compressibility of electrolytes;

3) ultrasonic investigations of physical and chemical properties of materials and the determination of physical and chemical constants, e. g. density, viscosity, surface tension, adiabatic compressibility, molarity of solutions (with given temperatures), viscosity, surface tension, saturation pressure and also ultrasonic investigation of the content and petrographic state of cellulosic materials; 4) applications of ultrasonics, e. g. emulsification of industrial cleaning of textile fibers and enhancing the permeability of some synthetic fibers to dyes, etc. and 5) apparatus which produce ultrasonic waves. No personalities are mentioned. References accompany each article.

References: I. G. and Yu. P. Ruznikov, The Problem of the Compressibility of Solutions of Electrolytes 65

Larionov, N. I., M. A. Baikalova and G. V. Goryachko, Investigation of the Physical and Chemical Properties of Aqueous Solutions of Diethyl Formate in the Temperature Interval from 20 to 90°C with the Ultrasonic and Other Methods 75

Otpushchenkov, M. P., Investigation of the Speed of Ultrasonic Waves in Methylalene and Hypoculite in the Range of Phase Transitions of the First Order 91

Radchiz, A. P., The Dependency of the Absorption of Ultrasonic Waves Upon Its Intensity 101

Gershenzon, Ye. M., The Use of Ultrasound to Create Periodic Structures 105

Ryzhkov, M. L., and G. P. Dyakov, Some New Magnetostrictive Materials 111

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Orishin, A. P., Ultrasonic Method of Investigating the Crystallization Process of Paraffinic Petroleum Products 127

Matveyev, A. F., and Ye. G. Kirtynov, Speed of Propagation of Transverse Ultrasonic Waves in Coal 135

Kirillov, O. D., Emulsification of Plotation Reagents by Ultrasonic Waves 143

Goryachko, G. V., M. A. Baikalova and M. I. Lantman, Investigation of the Effect of Sound and Ultrasound on the Physical and Hygienic Properties of Fibers During Purification Process 149

Goryachko, G. V., M. A. Baikalova and M. I. Lantman, Application of Ultrasound During Dyeing of Polyacrylonitrile Fiber of the "Nitron" Type 161

LARIONOV, N. I.

GORYACHKO, G. V., DMITRIYEVA, NA. and LARIONOV, N. I.

"Acceleration of the Dyeing of Synthetic Fibers."

report presented at the 6th Sci. Conference on the Application of Ultrasound in the investigation of Matter, 3-7 Feb 1958, organized by Min. of Education RSFSR and Moscow Oblast Pedagogic Inst. im N. K. Krupskaya.

GORYACHKO, G.V.; LARIONOV, N.I.; GLAZKOVSKIY, Yu.V.

Ultrasonic cleaning of spinnerets. Khim.volok. no.1:51-52
'60. (MIRA 13:6)

1. Kalininskiy pedinstitut (for Goryachko, Larionov). 2. Kalininskiy
filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusst-
vennogo volokna (for Glazkovskiy).

(Rayon spinning)

(Ultrasonic waves--Industrial applications)

5.4120
24.1800

65964

SOV/58-59-4-9090

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 4, p 245 (USSR)

AUTHORS: Larionov, N.I., Dmitriyeva, N.A., Goryachko, G.V.

TITLE: Study of the Physical and Chemical Properties of Aqueous Solutions of Dimethylformamide by the Ultrasonic and Other Methods in the 20° to 90°C Range

PERIODICAL: V sb.: Primeneniye ul'traakust. k issled. veshchestva, Nr 7, Moscow, 1958, pp 75 - 90

ABSTRACT: The authors submit the results of measuring the velocity of propagation and the molar velocity of ultrasonic waves, as well as the density, adiabatic compressibility, viscosity, surface tension, and refractive index in aqueous solutions of dimethylformamide (D) at concentrations ranging from 0% to 100% (at 10% intervals) and at various temperatures. The data are presented in the form of tables and curves. At 20°C the ultrasonic velocity passes through a maximum at a concentration of 50 wt %, the density up to a concentration of 60 wt.% is close to that of pure water, the adiabatic compressibility of D solutions passes through a minimum at a concentration of 50 wt.%, the viscosity shows

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65964

SOV/58-59-4-9990

Study of the Physical and Chemical Properties of Aqueous Solutions of Dimethylformamide by the Ultrasonic and Other Methods in the 20° to 90°C Range

a well-defined maximum at a concentration of 60 wt.%, the refractive index rises monotonously with the concentration, and the surface tension drops monotonously. The molar velocity of sound in aqueous solutions of D increases with an increase in the temperature and concentration. (Kalininskiy ped. in-t). ✓

A.A. Senkevich

Card 2/2

SOV/58-59-5-11512

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 5, p 228 (USSR)

AUTHORS: Goryachko, G.V., Dmitriyeva, N.A., Larionov, N.I. 15

TITLE: Use of Ultrasonic Waves to Dye Polyacrylonitrile "Nitron" Fiber

PERIODICAL: V sb.: Primeneniye ul'traakust. k issled. veshchestva. Nr 7, Moscow, 1958, pp 161 - 167

ABSTRACT: The authors report on the results of using ultrasonic waves (US) to dye polyacrylonitrile "nitron" fiber. It was established that the dry fiber is rapidly and permanently dyed with the aid of the dispersed dyes for acetate silk by a method involving the combined use of US and accelerants. The preliminary dispersing of the dye by means of US tells favorably on the dyeing rate and the utilization of the dye; in this connection it is more advantageous to use lower frequencies. Using US in conjunction with an accelerant (aniline) cuts the dyeing time in half as compared with the case of using the accelerant alone. The emulsions prepared under the influence of US yield better results. (Kalininskiy ped. in-t, USSR). ✓

Card 1/1

A.A. Senkevich

GELLER, B.E.; GORYACHKO, G.V.; DMITRIYEVA, N.A.; LARIONOV, N.I.

Destruction of polyacrylonitrile by the action of an ultrasonic field. Vysokom.soed. 1 no.11:1610-1616 N '59. (MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna i Kalininskiy pedagogicheskiy institut.
(Acrylonitrile) (Ultrasonic waves)

LARIONOV, N.I.

PHASE I BOOK EXPLOITATION

SOV/5644

Vserossiyskaya konferentsiya professorov i prepodavateley pedagogicheskikh institutov

Primeneniye ul' traakustiki k issledovaniyu veshchestva. vyp. 10. (Utilization of Ultrasonics for the Investigation of Materials. no. 10) Moscow, Izd-vo MOPI, 1960. 321 p. 1000 copies printed.

Eds.: V. F. Nozdrev, Professor, and B. B. Kudryavtsev, Professor.

PURPOSE: This book is intended for physicists and engineers interested in ultrasonic engineering.

COVERAGE: The collection of articles reviews present-day research in the application of ultrasound in medicine, chemistry, physics, metallurgy, ceramics, petroleum and mining engineering, defectoscopy, and other fields. No personalities are mentioned. References accompany individual articles.

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Utilization of Ultrasonics (Cont.)

SOV/5644

TABLE OF CONTENTS:

Nozdrev, V. F. Physical Principles of the Engineering and
Technical Use of Low-Amplitude Molecular Acoustics

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Larionov, N. I., G. V. Goryachko, N. A. Dmitriyeva, and
B. E. Geller [Kalininsk. pedinstitut im. M. I. Kalinina,
Kalininsk. filial VNIIV-Kalinin Pedagogical Institute imeni
M. I. Kalinin, Kalinin Branch of the All-Union Scientific
Research Institute for High Polymers]. Investigation of
Degradation Processes in High Polymers Under the Action
of an Ultrasonic Field

23

Kogan, I. N., L. I. Menes, and N. I. Parlashkevich [N. -i. in-
t plastmass - Scientific Research Institute for Plastics].
Continuous Measurement of Viscosity With the Aid of an
Ultrasonic Viscometer

33

Card 2/10

158530

26254
S/194/61/000/001/021/038
D216/D304

AUTHORS: Larionov, N.I., Goryachko, G.V., Dmitriyeva, N.A.
and Geller, B.E.

TITLE: Analysis of the high polymer degradation process
under the influence of an ultrasonic field

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,
no. 1, 1961, 15, abstract 1 E131 (V Sb. Primeneniye
ul'traakust. k issled. veshchestva, no. 10, M.,
1960, 23-32)

TEXT: The results are given of experimental analysis of the pro-
cess of degradation of polyacrylonitrile (ПАМ (PAN)) and of other
forms of polymers (e.g. acetyl cellulose АЦ - (АТs) in the solution
of dimethylformamide ДМФ (DMF)) under the action of a powerful
ultrasonic field as a function of frequency and power for concentra-
tions up to 5 g/l. It is shown that under the action of a field
intensity up to 20 W/cm² and frequency 500 Kc/s, the molecules of

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26254

S/194/61/000/001/021/038

D216/D304

Analysis of the high polymer...

PAN are degraded while those of acetylcellulose remain unchanged. This fact is explained by the strength of chemical bonds within the polymer structure between the polymer molecule and the side-groups. The kinetics of the degradation process of PAN have been studied. It is shown that the depolymerization process follows the 1st order reaction and that long chain molecules are degraded first. The results are shown in the form of graphs. 22 references.

Card 2/2

BARANOV, A.I.; GELLER, B.E.; LARIONOV, N.I.

Studying the properties of concentrated polymer solutions by the
ultrasonic testing method. Prim. ul'traakust. k issl. veshch.
no.14:217-225 '61. (MIRA 14:12)

(Polymers--Testing)
(Ultrasonic waves--Industrial applications)

35131

S/058/62/000/002/019/053

A058/A101

1.1800

AUTHORS: Tsepelev, A. I., Larionov, N. I., Mikhaylov, F. G.

TITLE: Ultrasonic effect in the process of galvanic plating

PERIODICAL: Referativnyy zhurnal, Fizika, no. 2, 1962, 43, abstract 20321
(V sb. "Primeneniye ul'traakust. k issled. veshchestva", no. 14,
Moscow, 1961, 227-230)

TEXT: Nickel-plating in an ultrasonic field enables one to increase the current density 2-3 times over and to carry out nickel-plating at reduced temperatures (20 - 30°C); at the same time, the quality of the nickel platings is improved. The isotherms of current density as a function of ultrasonic power were found. It was found that the highest yield of chromium per current takes place when ultrasonic intensity = 1 watt/cm². ✓

[Abstracter's note: Complete translation]

Card 1/1

11760

S/194/62/000/004/069/105
D295/D308

AUTHORS: Tsepelev, A. I., Larionov, N. I. and Mikhaylov, F. G.

TITLE: The influence of ultrasound on the galvanic-coating process

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 4, 1962, abstract 4-5-40g (V sb. Primeneniye ul'-traakust. k issled. veshchestva. no. 14, M., 1961, 227-230) ✓

TEXT: It is established that ultrasound of 22 kc/s enables one to increase the current density by 2 - 3 times and to carry out the nickel-plating process at a lowered temperature. The optimum ultrasonic intensity for the largest output of chromium for a given current is determined. The magnetostrictor is so placed that ultrasound propagates parallel to the surface of the object. The process of degreasing of the object before coating was intensified by ultrasound. 2 references. / Abstracter's note: Complete translation. /

Card 1/1

S/275/63/000/001/030/035
D413/D308

AUTHORS: Larionov, N. I. and Goryachko, G. V.

TITLE: The degradation of acetyl-cellulose under the action of an ultrasonic field

PERIODICAL: Referativnyy zhurnal, Elektronika i yeyo primeneniye, no. 1, 1963, 17, abstract 1V 123 (In collection: Primneniye ul'traakust. k issled. veshchestva, no. 15, M., 1961, 249-254)

TEXT: The authors have investigated the degradation of acetyl cellulose, dissolved in dimethylformamide (DMF), under the action of 300 kc/s ultrasonic vibration at an intensity of up to 20 w/cm². The range of concentrations 1 - 5 g/liter acetyl cellulose in DMF was used in this work, since in more concentrated solutions the results may be affected by factors related to the interaction of macromolecules. It was shown that under the action of an intense ultrasonic field the viscosity of solutions of acetyl cellulose in DMF decreases with time. A minimum viscosity is maintained for a

Card 1/2

The degradation of ...

S/275/63/000/001/030/035
D413/D308

lengthy period. This demonstrates that the fall in viscosity is due not to disaggregation of the solution but to degradation of the macromolecules of acetyl cellulose. The process of degradation of solutions of acetyl cellulose in DMF proceeds more slowly than the degradation of solutions of polyacrylonitrile in DMFm which indicates the effect of the strength of the chemical bonds in the polymer molecule. The action of an intense ultrasonic field, while causing degradation of the polymer, does not lead to a change in the ultrasonic wave velocity in the solutions. 8 references. [Abstracter's note: Complete translation.]

Card 2/2

L 42205-66 EWT(m)/EWP(j)/T/EWP(k) LFP(c) UM/G

ACC NR. AT6013182

SOURCE CODE: UR/0000/61/000/000/0017/02

AUTHORS: Baranov, A. I.; Geller, B. E.; Larionov, N. I.

ORG: none

TITLE: Study of the properties of concentrated polymer solutions using an ultrasound method

SOURCE: Moscow. Oblastnoy pedagogicheskiy institut. Primeneniye ul'traakustiki k issledovaniyu veshchestva, no. 14, 1961, 217-225

TOPIC TAGS: ultrasound, ultrasonic velocity, fluid density measurement, solution concentration, adiabatic compression, ultrasonic wave propagation

ABSTRACT: The relationship between the density, temperature, and concentration of concentrated solutions of perchlorovinyl, polyacrylonitrile, and acetylcellulose was investigated using ultrasonic methods. The work is presented as a part of a complex effort by N. I. Larionov, G. V. Goryachko, N. A. Dmitriyeva, B. E. Geller (Sb. Primeneniye ul'traakustiki k issledovaniyu veshchestva, vyp. X, str. 23, M., 1960), designed to study physical and chemical properties of polymers. Dimethylformamide was selected as the solvent. Changes in density, in the propagation velocity of ultrasound, and in adiabatic compressibility of the solutions were measured. The velocity of ultrasound was measured optically, with an accuracy of 1%. It was established that the propagation velocity is practically independent of the

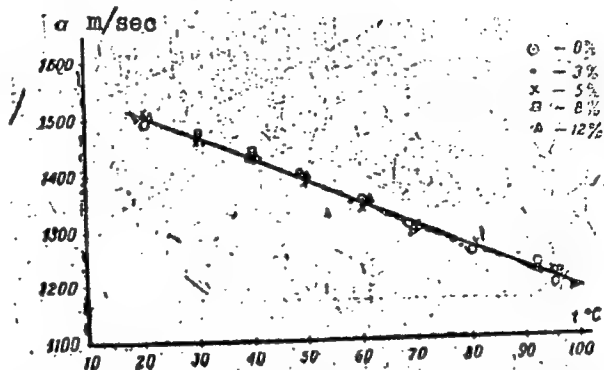
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L 42205-66

ACC NR: AT6013182

concentration of polymers (up to 20%) as shown in Fig. 1.

Fig. 1. Velocity of ultrasound as a function of temperature in acetylcellulose solutions.



Within concentration limits from 0—20% and temperature limits from 20—100°C the velocity of ultrasound is a linear function of solution density. The free volume is greater in concentrated solutions than in the pure solvent. Orig. art. has: 10 figures, 3 tables, and 2 equations.

SUB CODE: 07, 11, 20/ SUBM DATE: 22Apr61/ ORIG REF: 003/ OTH REF: 001

Cord 2/2 af

1ST AND 2ND CODING																										3RD AND 4TH CODING																									
COMMON ELEMENTS																										PROCESSES AND PROPERTIES INDEX																									
<p>1684. LARIONOV, N.M.</p> <p>EXPERIENCE IN MECHANIZATION OF SAMPLING AND OF DIVIDING UP PEAT SAMPLES. Larionov, NM (Torfyanaya Prom. (Peat Ind.), 1949, (9), 14-17). Description of three types of peat sampling plant of U.S.S.R. origin, including one which prepares samples for laboratory analysis without the use of hand labour.</p> <p>(L)</p>																																																			
METALLURGICAL LITERATURE CLASSIFICATION																										REGIONAL INDEX																									
<p>1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26.</p>																										<p>1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26.</p>																									

1. SKYUYEV, P.V., LARIONOV, N. V., Eng., SAPRYGIN, I. S.
2. USSR (600)
4. Metals - Heat Treatment
7. Reducing stresses in parts by annealing. No 9 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

LARIONOV, O. G.

Utilization of ion-exchange resins for purifying quartz
suspensions. K. V. Chumakov and O. G. Larionov (Inst.
Phys. Chem., Acad. Sci. U.S.S.R., Moscow). Kolloid
Zhur. 19, 399 (1967). - Quartz suspensions contg. metal par-
ticles from the mill are purified by treating them with a
mixt. of HCl + HNO₃ and filtering the resulting liquid
through a cation-exchange resin in its H state.

J. J. Bikerman

YELOVICH, S.Yu.; LARIONOV, O.G.

Chromatographic removal of thiophene from benzene. Zhur.prikl.
khim. 34 no.9:2067-2073 S '61. (MIRA 14:9)

(Benzene) (Thiophene)

YELOVICH, S.Yu. [deceased]; LARIONOV, O.G.

Theory of adsorption from solutions of nonelectrolytes on solid adsorbents. Report No.1: Equation of the isotherm of adsorption from solutions and the analysis of its simplest form. Izv. AN SSSR Otd.khim.nauk no.2:209-216 F '62. (MIRA15:2)

1. Institut fizicheskoy khimii AN SSSR.
(Adsorption)

YELOVICH, S.Yu. [deceased]; LARIONOV, O.G.

Theory of adsorption from solutions of nonelectrolytes on solid adsorbents. Report No.2. Experimental verification of the equation of the isotherm of adsorption from solutions. Izv. AN SSSR Otd.khim.nauk no.2:216-222 F '62. (MIRA 15:2)

1. Institut fizicheskoy khimii AN SSSR.
(Adsorption)

YELOVIN, S.Yu.; LARIONOV, O.G.

Adsorption from solutions of nonelectrolytes using solid
adsorbents. Izv.AN SSSR.Otd.khim.nauk no.3:529-531 Mr
'62. (MIRA 15:3)

1. Institut fizicheskoy khimii AN SSSR.
(Adsorption) (Solution (Chemistry))

YELOVIN, S.Yu.; LARIONOV, O.G.

Application of mass-action law to adsorption equilibrium.
Izv.AN SSSR.Otd.khim.nauk no.3:531-533 Mr '62. (MIRA 15:3)

1. Institut fizicheskoy khimii AN SSSR.
(Activity coefficients) (Phase rule and equilibrium)
(Adsorption)

LARIONOV, O.G.

Equilibrium condition during adsorption from aqueous
solutions. Izv. AN SSSR. Ser. khim. no.11:2051-2052
'65. (MIRA 18:11)

1. Institut fizicheskoy khimii AN SSSR.

ALEKSANDROV, G.G.; LARIONOV, O.G.; CHMUTOV, K.V.

Device for studying the kinetics of adsorption from liquid mixtures on crystalline zeolites. Zhur. fiz. khim. 39 no.4: 1034-1035 Ap '65. (MIRA 19:1)

1. Institut fizicheskoy khimii AN SSSR. Submitted Aug. 22, 1964.

LARIONOV, O.G.; TONKONOG, L.G.; CHMUTOV, K.V.

Calculating the true adsorption of mixture components from
nonelectrolyte solutions. Zhur. fiz. khim. 39 no.9:2226-
2231 S '65. (MIRA 18:10)

1. Institut fizicheskoy khimii AN SSSR.

~~LARIONOV~~
LARIONOV, O.V.

AUTHORS: Murin, A. N., Nefedov, V. D., Sinotova, Ye. N., 78-1-33/43
Larionov, O. V.

TITLE: The Separation of the Nuclear Isomers of Tellurium,
Mercury and Tin (Razdeleniye yadernykh izomerov tellura,
rtuti i olova)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 1,
pp. 181-183 (USSR)

ABSTRACT: After giving a review of the separation methods of the
nuclear isomers of tellurium (references 1,2) and after
their discussion the authors chose dimethyl-dinitrate of
tellurium as the initial compound for the separation of the
nuclear isomers of T^{127} . It must be expected that the transi-
tion to an intermediate level will occur by means of an in-
ternal conversion and for this reason will be accompanied
by a disturbance of the chemical binding of tellurium in the
initial compound. Therefore a considerable portion of the
nuclei of Te^{127} will be present as most simple anorganic
forms in the ground state in the preparation dimethyl-
dinitrate of tellurium. Te^{127} in its ground state was isolated

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Mercury and Tin

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by means of the adsorption of these anorganic forms by ferric hydroxide. The extraction with isopropylether from 9 n HCl was intended for the removal of the an isotropic carriers, that is to say, iron. From the decay curve of the lowest isolated isomer (figure 1) follows, that only one tellurium isotope was existent, which had a half life of 9'3 hours. This testified to the presence of only the lowest isomer in the preparation. The yield of Te^{127} was determined to 80%, if it was accumulated in crystals, and to 94%, if it was accumulated in a solution. The latter value is in good correspondence with the known fact, that the isomeric transition in Te^{127} is converted to practically 100%. This implies, that the initial molecule is destroyed by every process of isomeric transition, which is accompanied by an internal conversion. The yield is somewhat lower, if accumulation takes place in crystals. The isolated radioactive Te^{127} predominantly takes its four-valent form and only 6 % of it take the six-valent one. This method possesses several advantages in comparison to the ones known hitherto (reference 1). If mercury is irradiated with neutrons according

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The Separation of the Nuclear Isomers of Tellurium,
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78-1-33/43

to the reactions (n, γ) and $(n, 2n)$, radioactive isotopes are formed: Hg^{197} , Hg^{199} , Hg^{203} and Hg^{205} . Because at least six days elapsed until the separation was performed it can be assumed, that in the synthesized initial preparation - mercury diethyl only Hg^{203} , Hg^{197m} and Hg^{197} were present. From the investigations of the Laboratory for Radiochemistry of the University Leningrad (reference 3-6) it results, that the complete aliphatic mercury derivatives may undergo an irreversible destruction of the chemical bondings on isomeric transitions. The isolation of Hg^{197} in the ground level was performed by means of adsorption on manganese dioxide. The separation from the carrier can be achieved by methods, which are based on the volatility of mercury and its derivatives. The separation of the nuclear isomers as such can be determined from a comparison of the curves of decreasing activity of the mercury preparations (figure 2). When tin is irradiated by thermal neutrons, radioactive nuclei are formed: Sn^{113} (yields In^{113m} , Sn^{117m} and Sn^{119m} by decay). From the three latter ones stable isotopes are produced by an isomeric transmutation: Sn^{117} and Sn^{119} , Sn^{121} , Sn^{123} and Sn^{125} were isolated in the ground

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Mercury and Tin

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state from a benzene solution of stannic tetraphenyl by way of extraction. Because of the fact, that the isomers Sn^{123} and Sn^{125} have no genetic inter-relation, Sn^{121} and $\text{In}^{113\text{m}}$ will pass over into the water layer during the extraction. For this reason the activity measurement was started after the lapse of from 10-12 half life periods of $\text{In}^{113\text{m}}$ ($T = 105$ minutes). The decay curve of Sn^{121} is represented by figure 3. The accumulation of Sn^{121} with time was examined (figure 4) for the purpose of proving the genetic relation between Sn^{121} in ground state and $\text{Sn}^{121\text{m}}$. The method described here may be considered the most universal. It makes furthermore possible to isolate the nuclei in a low isomeric state without carriers. There are 4 figures, and 6 references, 4 of which are Slavic.

SUBMITTED: June 18, 1957

AVAILABLE: Library of Congress

Card 4/4

24 (5)

AUTHORS:

Baranovskiy, V. I., Larionov, O. V.,
Nikitin, M. K., Tkachenko, A. A.

SOV/54-59-2-4/24

TITLE:

On the Problem of Natural Neutron Activity of Arsenic and Antimony (K voprosu o yestestvennoy neytronnoy aktivnosti mysh'yaka i sur'my)

PERIODICAL:

Vestnik Leningradskogo universiteta. Seriya fiziki i khimii, 1959, Nr 2, pp 25-26 (USSR)

ABSTRACT:

In the papers by A. Dorabialska and M. Serwinski (Refs 1-3), it had been asserted that ordinary arsenic and antimony are sources of quick neutrons. By means of these neutrons, the authors had succeeded in activating Cu, Br, J and other elements. They set up a conversion scheme which, however, disagrees with the experimental mass determinations of the elements occurring in this scheme; even the inverse reactions had been observed in experiments. In order to prove that no neutrons are radiated from the said elements under natural conditions, the same experiments as described in the papers (Refs 1-3) were repeated in this paper. The exposition of the materials to be activated was carried out both by direct contact of As and Sb of high purity with activated materials,

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On the Problem of Natural Neutron Activity of
Arsenic and Antimony

SOV/54-59-2-4/24

and with the use of moderators. All investigations proceeded with a negative result. Under experimental conditions as they were used in this investigation, a neutron decay of the As- and Sb-nuclei could have been detected only at a half-life period of $T_{\frac{1}{2}} \leq 10^{16}$ a. For the self-activation of

the said nuclei, the background of the neutron capturing cross section should have been increased which has not been detected either. β -particles from a β -decay with energies > 0.05 Mev were missing. In all results obtained, the authors could not find a foundation for the assertion of a possible independent neutron decay in the As- and Sb-nuclei. Finally, the authors thank V. D. Nefedov for the discussions. There are 6 references, 1 of which is Soviet.

SUBMITTED: June 14, 1958

Card 2/2

BARANOVSKIY, V.I.; LARIONOV, O.V.; NIKITIN, M.K.; TKACHENKO, A.A.

Natural neutron activity of arsenic and antimony. Vest.LGU 14
no.10:25-26 '59. (MIRA 12:6)
(Arsenic--Isotopes) (Antimony--Isotopes)
(Neutrons)

83502

S/048/60/024/007/001/011
B019/B060

24,6600
AUTHORS:

Bashilov, A. A. (Deceased), Larionov, O. V., Nikitin,
M. K., Smirnov, V. B.

TITLE:

Eu¹⁴⁵ Production in Ta Spallation Reactions /9

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,
Vol. 24, No. 7, pp. 788-790

TEXT: This is the reproduction of a lecture delivered at the 10th
All-Union Conference on Nuclear Spectroscopy held in Moscow from January
19 to 27, 1960. The authors studied the Eu¹⁴⁵ production in Ta spallation
reactions produced by 660-Mev protons. The synchrocyclotron used belonged
to the OIYAI (Joint Institute of Nuclear Research). The Eu isotopes pro-
duced in the reactions were examined with gamma rays. Six hours after the
Ta target irradiation, the rare earths were chemically separated and the
fractions of the individual rare earth elements were further separated.
The Eu fraction was purified chromatographically and was then added to a
diluted HNO₃ solution containing La³⁺ for the prevention of absorption.

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Eu¹⁴⁵ Production in Ta Spallation Reactions

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Gamma emission was investigated with a NaI scintillation spectrometer. Apart from the gamma lines of Eu¹⁴⁶, Eu¹⁴⁷, and Eu¹⁴⁹, the authors identified 0.89, 1.66, 1.86, and 2.0 Mev lines, whose intensity drop corresponded to a half-life $T = 5.5$ days (Fig. 2). Thorough examinations made on the daughter products gave evidence that the observed Eu activity with a half-life of 5.5 days must be ascribed to the Eu¹⁴⁵ isotope. The data obtained here agree with those of Hoff and others (Ref. 4). The authors thank I. B. Stankevich for having conducted the chemical operations, and V. B. Savichev for his assistance in the measurements. There are 4 figures and 4 references: 3 Soviet and 1 US. ✓

ASSOCIATION: Nauchno-issledovatel'skiy fizicheskiy institut
Leningradskogo gos. universiteta im. A. A. Zhdanova
(Scientific Research Institute of Physics of the
Leningrad State University imeni A. A. Zhdanov)

Card 2/2

85585

S/048/60/024/007/018/032/XX
B019/B056

24.6720
AUTHORS:

Grigor'yev, Ye. P., Larionov, O. V., Nikitin, M. K.,
Sakharov, S. L., and Sergeyev, V. O.

TITLE:

The Determination of the Halflife of Dy^{159} , Ho^{160} , Tu^{166}
and Lu^{173} ✓

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,
Vol. 24, No. 7, pp. 841-844

TEXT: This paper was read at the 10th All-Union Conference on Nuclear Spectroscopy, which took place from January 19 to January 27, 1960 at Moscow. The isotopes investigated were obtained by the irradiation of Ta-targets with 660-Mev protons in the synchrocyclotron of the Ob'yedinennyi institut yadernykh issledovaniy (Joint Institute of Nuclear Research) and a subsequent chemical and chromatographical separation. For determining the halflife an end-window counter was used, which was protected by a Pb-shield.

As a control isotope, Dy^{159} was selected. The authors determined a halflife $T = 139 \pm 10$ days, which agrees with the data obtained by other

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85586

24.6720

AUTHORS:

S/048/60/024/007/019/032/XX
B019/B056

Grigor'yev, Ye. P., Larionov, O. V., Nikitin, M. K.,
Sakharov, S. L., and Sergeyev, V. O.

TITLE:

The γ -Spectra of the Isotopes of the Tantalum Fraction

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,
Vol. 24, No. 7, pp. 845-846

TEXT: This paper was read at the 10th All-Union Conference on Nuclear Spectroscopy, which took place from January 19 to January 27, 1960 at Moscow. In the synchrocyclotron of the OIYaI, a Ta-target was irradiated with 660-Mev protons, following which, tantalum was separated and the radioactive Ta-isotopes were investigated by means of an automatic scintillation- γ -spectrometer. According to the halflife of the γ -lines, the Ta-isotopes may be subdivided into two groups. There are some isotopes with a halflife T of roughly 8 hours, and others with T = 53 hours. The energy and the relative intensities of the γ -lines of those Ta-isotopes whose T is about 8 - 11 hours, are given in Table 1;

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The γ -Spectra of the Isotopes of the Tantalum Fraction

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E [kev]	55	115+5	210+10	270	350	500	1150	1700
I _g	100	10	7	2	2	0.3	0.7	0.3

By comparison with data obtained by other authors, the authors draw the conclusion that in their Ta-fraction the isotopes Ta¹⁷⁶ (8 hours) and Ta¹⁷⁵ (11 hours) are present. In Table 2, the energies and the relative intensities of the hard γ -lines of the Ta-isotope of a halflife of 8 hours are given:

E _g [Mev]	1.7	2.2 - 2.3	2.7	2.8
I _g	3	1	0.3	1

These hard lines may possibly belong to a Ta¹⁷⁶-decay. From the data obtained here, the authors conclude that the mass difference between Ta¹⁷⁶ and Hf¹⁷⁶ is more than 3 Mev. There are 2 figures, 2 tables, and 7 references: 1 Soviet and 6 US.

ASSOCIATION: Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo gos. universiteta im. A. A. Zhdanova (Scientific Research Institute of Physics of Leningrad State University imeni A. A. Zhdanov)

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24066

S/054/61/000/002/004/005
B101/B207

5.2300

1087

AUTHOR: Larionov, O. V., Nikitin, M. K.

TITLE: The problem of separating rare-earths elements from tantalum

PERIODICAL: Leningradskiy Universitet. Vestnik. Seriya fiziki i khimii, no. 2, 1961, 73 - 76

TEXT: The aim of the present study was the chromatographic partition of rare-earths elements (REE) from tantalum without using a carrier, in order to obtain tantalum completely free from REE isotopes. The usual precipitation of REE as fluorides is incomplete. Furthermore, other elements, such as Hf, are coprecipitated. Thus, the separation and study of the radioactive isotopes of Hf are rendered difficult. On the assumption that REE exist in a Hf medium as cations, tantalum (as well as Hf and Zr) as anions (TaF_7^{2-} , TaF_8^{3-}) the adsorption of REE cations on cation exchangers was studied. The distribution of microquantities of Eu^{152}

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The problem of separating ...

among the Hf solution, the resins KY-2 (KU-2), and Dowex-50 was investigated: Eu¹⁵² was completely adsorbed at concentrations of 10^{-7} - 10^{-8} g/ml of 5-7 mg resin, while Ta¹⁸² was not adsorbed. Further experiments were carried out at room temperature with a chromatographic column of 2 mm diameter, filled with commercial KU-2 in the form of H⁺ (grain size, ~ 50 μ ; layer height, 3-4 mm), on plexiglass wadding. The solution was pressed through the exchanger by a mercury column. Eu¹⁵² was completely separated from the inactive Ta (concentration up to 0.35 g/ml) at a rate of one drop every 10-12 sec (1 drop ~ 1/20 ml). At a higher flow rate (one drop every 2-4 sec), up to 10% of Eu was not adsorbed by the exchanger. The presence of HNO₃ deteriorated the results. The elution curves of Fig. 2 show that concentrated HNO₃+saturated H₃BO₃ solution is the most effective eluent. The method described was successfully applied to the quantitative separation of REE isotopes from tantalum which was irradiated with

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S/054/61/000/002/004/005
B101/B207

The problem of separating ...

among the Hf solution, the resins KY-2 (KU-2), and Dowex-50 was investigated: Eu¹⁵² was completely adsorbed at concentrations of 10^{-7} - 10^{-8} g/ml of 5-7 mg resin, while Ta¹⁸² was not adsorbed. Further experiments were carried out at room temperature with a chromatographic column of 2 mm diameter, filled with commercial KU-2 in the form of H⁺ (grain size, ~ 50 μ ; layer height, 3-4 mm), on plexiglass wadding. The solution was pressed through the exchanger by a mercury column. Eu¹⁵² was completely separated from the inactive Ta (concentration up to 0.35 g/ml) at a rate of one drop every 10-12 sec (1 drop ~ 1/20 ml). At a higher flow rate (one drop every 2-4 sec), up to 10% of Eu was not adsorbed by the exchanger. The presence of HNO₃ deteriorated the results. The elution curves of Fig. 2 show that concentrated HNO₃+saturated H₃BO₃ solution is the most effective eluent. The method described was successfully applied to the quantitative separation of REE isotopes from tantalum which was irradiated with

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The problem of separating ...

660-Mev protons. This mode of separation is more complete than that performed by the fluoride method. There are 2 figures and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. The 3 references to English-language publications read as follows: H. J. Hettel, V. Fassel, Anal. Chem., 27, 1311, 1955; Nervik a. Seaborg, Phys. Rev., 27, 1092, 1954; H. Gest, W. H. Burgus, T. H. Davies, Radiochemical studies. The fission products. Book 1, paper 13, 1951

SUBMITTED: May, 1959

Fig. 2: Curves of REE elution. Legend: 1) HNO_3 ; 2) HCl ; 3) $\text{HNO}_3 + \text{H}_3\text{BO}_3$; a) pulses per min., b) number of drops.

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23883
S/186/61/003/001/016/020
A051/A129

21,3200
AUTHORS: Murin, A.N., Nefedov, V.D., Larionov, O.V.

TITLE: The separation of nuclear isomers of tellurium

PERIODICAL: Radiokhimiya, v 3, no 1, 1961, 90-96

TEXT: The authors have developed a new method for the separation of nuclear isomers of tellurium and the separation of lower isomer compound states without a carrier, as well as a method for the separation of radio-chemically pure Te^{127} from irradiated tellurium dimethyldinitrate with neutrons (and γ -quanta). They show that the extraction of Te^{127} from the irradiated sample reaches a yield close to 100%, which corresponds to the break of the chemical bond in each converted isomer transition. The greater part (about 91%) of the extracted Te^{127} is in the lower tetra-valent state and only about 9% is in the hexa-valent state. The initial compound used for the separation of the main isomer state of tellurium was tellurium dimethyldi-

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The separation of nuclear isomers of tellurium

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nitrate $(\text{CH}_3)_2\text{Te}(\text{NO}_3)_2$. The latter was formed from tellurium dimethyldiiodine: $\text{Te} + 2(\text{CH}_3)_2\text{I}_2 \rightarrow (\text{CH}_3)_2\text{TeI}_2$. The authors investigated various ways of isolating Te in the basic state: 1) extraction of the basic salts of Mn on the residue formed when an alcohol solution of $\text{Mn}(\text{CH}_3\text{COO})_2$ is added to the acetone solution $(\text{CH}_3)_2\text{Te}(\text{NO}_3)_2$ was found to be inconvenient, since the residue retained most of the initial quantity of the compound; 2) extraction on the residue of H_2WO_4 gave a small yield; 3) extraction on MnO_2 was impossible due to oxidation of the initial compound and dissolution of MnO_2 ; 4) extraction on the metal hydroxides (Fe, Bi) gave the highest yield of Te in the basic state. The authors adopted the Te isolation method on iron hydroxide. The curve of Fig 3 shows that there is only one isotope with a half-life of 9.3 hours, which proves the presence of Te^{127} in the sample in the basic state. The degree of impurities was studied using metastable Te^{127m} , whereby the decay of the Te^{127} samples was investigated (Fig 2). Further, the radiochemical purity of samples produced according to the authors' methods was compared to that produced according to the methods of Siborg, Livinhood and Kennedy. The average yield was found to be $79.5 \pm 2.2\%$.

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The separation of nuclear isomers of tellurium

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when accumulated in crystals. The high yields noted by the authors are thought to be the result of the sharply expressed irreversibility of the occurring chemical changes during isomer transition when using $(\text{CH}_3)_2\text{Te}(\text{NO}_3)_2$. The data of Table 2 show that with an accumulation of Te in the crystals the yield of the basic state is somewhat less since in this case there is a greater stability of the basic state of Te^{127} in the form of the initial tellurium dimethyldinitrate compound. The difference in the chemical behavior of the tetra and hexa-valent states of Te helps to solve the problem of Te distribution between these valency states. The study of this question was carried out by the isotopes carrier method corresponding to various chemical compounds (TeO_2 and H_2TeO_4). The separation of the 6- and 4-valent Te was based on the reduction of the latter to the elemental state by sulfur dioxide in a 3 n solution of HCl (Ref 12). The average yields are equal to $8.5 \pm 1.2\%$ and $91.5 \pm 1.2\%$, respectively. The fact that most of Te^{127} is in the lower valency state is explained by secondary processes which occur after the above-mentioned phenomena. The activation of Te in the main state was conducted on a betatron and the separation of Te in the main state was carried out according to the reaction (γ, n) (Fig 4). There are 4 figures, 4 tables and 14 references: 6 Soviet-bloc, 8 non-Soviet-bloc.

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S/186/61/003/005/020/022
E111/E485

AUTHORS: Nefedov, V.D., Larionov, O.V.

TITLE: A constant carrierless Tl^{206} source

PERIODICAL: Radiokhimiya, v.3, no.5, 1961, 639

TEXT: The authors describe a method of production of preparations of Tl^{206} without carrier. This method can also be used for detecting the presence of Bi^{210} in bismuth preparations. It is known that if Bi^{210} obtained by neutron irradiation of bismuth is introduced into an organometallic compound $[(C_6H_5)_3Bi$ or $(C_6H_5)_3BiCl_2]$, this preparation can serve as a carrierless Tl^{206} source. The metallic bismuth was neutron irradiated for a long time and then kept for half a year. After this it was dissolved and repeatedly cleaned from polonium. As most convenient starting compound, $(C_6H_5)_3BiCl_2$ was chosen being more stable than $(C_6H_5)_3Bi$. In this case, Tl^{206} was extracted from the benzene solution $(C_6H_5)_3Bi^*Cl_2$ by 5% hydrochloric acid. In the case of $(C_6H_5)_3Bi^*Tl^{206}$ was extracted from the ethereal solution of the bismuth organic compound by water. It was found that the yield of Tl^{206} was higher if it was directly separated on MnO_2 from the benzene solution by addition of a few drops of

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A constant carrierless Tl^{206} source

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$KMnO_4$ in acetone and hydrogen peroxide. This proved that part of the resulting Tl^{206} is in the form of organo-metallic compounds. To identify Tl^{206} from the half-life period it was isolated from the enriched fraction with an isotope carrier in the form of $Tl(OH)_3$ or by adsorption on MnO_2 . The half-life period T was found from the equation

$$T = -t \frac{0.301}{\log A_{2t} - \log A_t}$$

where t is a definite time interval at which activity determinations were made, A_t is the number of disintegrations in time t and A_{2t} that in time $2t$. T values (minutes) obtained were 4.5, 4.8, 4.9. There are 1 figure and 5 references:

2 Soviet-bloc and 3 non-Soviet-bloc. The three references to English language publications read as follows:

Ref.1: H.M.Neumann, J.J.Howland, I.Pperlman, Phys. Rev., 77, 720 (1950); Ref.2: H.B.Levy, I.Pperlman, Phys. Rev., 85, 758 (1952); Ref.3: H.B.Levy, I.Pperlman, Phys. Rev., 94, 152 (1954).

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89250

S/048/61/025/001/016/031
B029/B060

24.6720

AUTHORS:

Berlovich, E. Ye., Larionov, O. V., Tunimanova, E. N.,
Khay, D. M.

TITLE:

Study of the decay schemes of Gd^{146} , Gd^{147} , and Gd^{149} by a
beta - gamma coincidence spectrometer

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25,
no. 1, 1961, 90-97

TEXT: A study has been made of the cascade properties of transitions in
gadolinium isotopes by the method of coincidences with a view to defining
the details of the decay schemes of these isotopes. N. M. Anton'yeva,
A. A. Bashilov et al. (Refs. 2,3,4), in their papers submitted to the 8th
All-Union Conference on Nuclear Spectroscopy of 1958, had offered a
thorough study of the spectra of conversion electrons of Gd^{146} , Gd^{147} , and
 Gd^{149} . B. S. Dzhelepov, V. A. Sergiyenko et al. (Refs. 5,6) studied the
coincidences between the conversion electrons of these isotopes in 1959.
Fig. 2 shows the block diagram of the coincidence spectrometer, X

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B029/B060

Study of the decay schemes of...

consisting of two branches, used here. The two branches represent a sector-type magnet spectrometer with improved focusing and a scintillation spectrometer with a NaI crystal. The recorders were two time photo-multipliers of the type $\Phi 9V-14$ (FEU-14) after G. S. Vil'dgrube. Measurement results: Gd^{146} : Fig. 3 shows the curve of the coincidences of electrons of the K line of transition $(114.8 + 115.5)kev$ with the gamma rays of the gadolinium fraction. The measurements took place 100 days after the separation of the fraction from the target irradiated with 660-Mev protons. Fig. 4 shows the analogous curve for the K line of the 155-kev transition. Two incompletely resolved coincidence peaks are observed; peak 1 characterizes the coincidences $K114.8 - \gamma 115.5$ and $115.5 - \gamma 114.8$; peak 2 refers to $K(114.8 + 115.5) - \gamma 155$. The results found, while confirming the cascade property of all of the three transitions, do not, however, add any new information to the results given by B. S. Dzhelepov and V. A. Sergiyenko (Ref. 5). Still, they may be regarded as a good confirmation of the hitherto assumed decay scheme of Gd^{146} . Fig. 5 shows the peaks of the coincidences of the 229-kev electrons with the gamma rays (scintillation branch), and Fig. 6 shows the

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B029/B060

Study of the decay schemes of...

peaks of the coincidences of the 396 kev-K-line electrons with the same gamma rays. The K229 electrons coincide with the 396-kev gamma rays. The peak of coincidences is, however, widened by an admixture of 370-kev gamma quanta. In the spectrum of coincidences there are still further, although not sharp, maxima, which correspond to the 560 ± 20 , and 760 ± 25 -kev energies, as well as a poorly marked coincidence peak in the 900-kev range. Weak maxima are also observed with 396-kev electrons, namely, in the 480 ± 30 and 560 ± 30 -kev energy range. Figs. 7 and 8 show the coincidence curves of conversion K electrons of the 149.8 and 346-kev transitions with the gamma rays recorded in the scintillation branch. K 149.8 electrons provide coincidences with the 346 and 530 ± 20 -kev gamma quanta. K 346 electrons provide coincidences with 150 and 298-kev gamma quanta. According to the results obtained, the 298-kev transition in the nucleus of $^{63}\text{Eu}^{149}$ is surely to be found in the 346- and 149.8-kev gamma cascade. This transition lies above the isomeric level and proceeds from the 795-kev level. Spin and parity $9/2^-$ or $11/2^-$ must be ascribed to this level. The intensities of 346 and 298-kev transitions are almost equally high. The excitation of the 497-kev level by electron capture is,

X

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S/048/61/025/001/016/031
B029/B060

Study of the decay schemes of...

in fact, more probable than the excitation of the 795-kev level. The other results found regarding the coincidences are in good agreement with the decay scheme of Gd^{149} suggested by N. M. Anton'yeva et al. (Ref. 3). The article under consideration is the reproduction of a lecture delivered at the 10th All-Union Conference on Nuclear Spectroscopy, which took place in Moscow from January 19 to 27, 1960. There are 11 figures, 1 table, and 9 references: 8 Soviet-bloc and 1 non-Soviet-bloc. X

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Institute of Physics and Technology imeni A. F. Ioffe, Academy of Sciences USSR)

Legend to Fig. 2: 1) magnetic spectrometer (a) source container, (6) deflection chamber, (8) counter chamber, (2) source; 2) limiters; 3) variable delay line; 4) fast-coincidence block, (5) amplifier; 5) differential pulse height analyzer; 6) triple coincidence circuit; 7) counter.

Card 4/9

LARIONOV, P., inzh. (Krasnoyarsk)

Stove for the northern regions. Pozh.delo 5 no.11:11 N '59.
(MIRA 13:4)

(Stoves)

LARIONOV, P.D.

Materials on the nutrition and reproduction of the East Siberian hawk (*Accipiter nisus nisosimilis* Tickell) and the Yakut falcon (*Falco peregrinus kleinschmidtii* Dem.). Uch. zap. IAK, un. no.1: 120-132 '57. (MIRA 11:3)

(Yakutia--Hawks)

LARIONOV, P.D.

Materials on winter bird fauna in the environs of Yakutsk
[With summary in English]. Zool. zhur. 38 no.2:253-260 ♀ '59.
(MIRA 12:3)

1. Chair of Zoology, Yakutsk State University.
(Yakutsk region--Birds)

LARIONOV, P.D.

Conditions of hibernation of vipers at the northern limit of
their range in the Lena Valley. Zool. zhur. 40 no. 2:289-290
F '61. (MIRA 14:2)

1. Department of Zoology, State University of Yakutsk.
(Kytul-Zhura region--Serpents) (Hibernation)

MIKHAYLOV, N.V.; BUKOV, G.A.; GORBACHEVA, V.O.; MAKAROVA, T.P.; v rabote
prinimali uchastiye: LARIONOV, P.E.; SOROKINA, V.I.; ZOTOV, Ya.E.

Studying the formation mechanism of synthetic fibers from molten
materials. Khim.volok. no.1:33-36 '59. (MIRA 12:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna.

(Textile fibers, Synthetic)



LARIONOV, P.I., inzh.

Foreign machines for cleaning trenches. Stroiki dor.mashinost.
4 no.10:34-36 0 '59. (MIRA 13:2)
(Road machinery)

LARIONOV, P.I., inzh.

Domestic and foreign asphalt heaters. Stroi. i dor. mash. 8
no.11:25-28 N '63. (MIRA 17:1)

LARIONOV, P.I., inzh.

Foreign road markers. Stroi. i dor. mashinostr. 5 no.5:34-37 My
'60. (MIRA 14:4)

(Road markings)

NOZIK, Z.S.; LARIONOV, P.I.

Attachment for milling cutters. Mashinostroitel' no.3:23 Mr '61.

(MIRA 14:3)

(Milling machines—Attachments)

LARIONOV, P.I., inzh.

Organization of the maintenance and repair of highways in Hungary.
Avt.dor. 25 no.7:27-28 J1 '62. (MIRA 15:8)
(Hungary--Roads--Maintenance and repair)

MIKHAYLOV, N.V.; SHEYN, T.I.; GORBACHEVA, V.O.; TOPCHIBASHEVA, V.N.;
v rabote prinimali uchastiye tekhniki-laboranty; IARIONOV, P.M.;
VLASOVA, L.P.; MURASHKINA, S.I.

Investigating the molecular structure of synthetic fibers.
Part 14: Physicochemical and physicochemical properties of
the polycapramide - polyundecanamide polyamide group. Vysokom.
soed. 1 no.2:185-190 F '59. (MIRA 12:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna.

(Textile fibers, Synthetic) (Amides)

LARIONOV, P.M.

Quality control in manufacturing instruments. Izv. tekhn.
no. 3:60 Mr '61. (MIRA 14:2)
(Instrument manufacture—Quality control)

SHCHEGLOVA, O. P., kand. fiz.-matem. nauk; LUT, B. F.; MECHITOV, I. I.,
kand. tekhn. nauk (Tbilisi); IVERONOVA, I. M., kand. geograf.
nauk (Moskva); IOGANSON, V. Ye. (Moskva); LARIONOV, P. M.
(Uzhgorod)

Mud torrents. Prioroda 52 no.1:90-96 '63. (MIRA 16:1)

1. Tashkentskiy gosudarstvennyy universitet im. V. I. Lenina
for Shcheglova). 2. Baykal'skaya limnologicheskaya stantsiya,
poselok Listvenichnoye, Irkutskaya obl. (for Lut).

(Runoff) (Erosion)

LARIONOV, S.F., inzh.; POZDNYAK, A.A., inzh.

Concerning I.I.Khazovskii's article "Change-over to centralized structure of the departments in electric power plants." Elek. sta. 33 no.7:90-91 J1 '62. (MIRA 15:8)
(Electric power plants) (Khazovskii, I.I.)

LARIONOV, S. N.

USSR/General and Specialized Zoology. Insects. Injurious P
Insects and Ticks. General Problems

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 49536

Author : Larionov S. N.

Inst :

Title : Lethrus Beetles as Pests of Agricultural Crops in
Southern Kazakhstan.

Orig Pub : Zashchita rast. ot vredit. i bolezney, 1957,
No 4, 52

Abstract : Lethrus bituberculatus and L. scoparius were
found in quantities of 0.1-8 individuals per
 m^2 in regions of the former Golodnaya Steppe
on virgin lands, waste lands, soddy shoulders of
roads and irrigators, old uncultivated alfalfa
fields and vineyards. They damaged tomatoes,
cabbage, carrots, corn, cotton and grape vine.
Methods of control were tilling and stirring up

Card : 1/2

Larionov, S. P.

137-1957-12-23701

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 123 (USSR)

AUTHOR: Larionov, S. P.

TITLE: An Investigation of the Process of Upsetting Cylindrical Specimens With an Opening (Issledovaniye protsessa osazhivaniya tsilindricheskikh obraztsov s otverstiyem)

PERIODICAL: Sb. stud. nauchn. rabot. Belorussk. politekhn. in-t, 1957, Nr 3, pp 5-8

ABSTRACT: The possibility of welding-up defects in metals was studied on specimens with openings (O). The changes in the shape of the O were investigated under monoaxial compression conducive to the complete disappearance of O. Complete welding-up would not occur, since almost always minute cracks remained at the point of the weld. Therefore, bars of non-plastic alloys of insufficiently dense structure should be extruded from the container through a die in order to transform the cast structure into a deformation structure under conditions most favorable for the elimination of density discontinuities.

Card 1/1 1. Metals-Defects-Salvage methods

V. O.

S/078/61/006/001/005/019
B017/B054

AUTHORS: Batyayev, I. M., Larionov, S. V., Shul'man, V. M.

TITLE: Stability of Complex Compounds of Lanthanum, Cerium, Praseodymium, and Neodymium With Aspartic Acid

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 1, pp. 153 - 156

TEXT: Complex compounds of lanthanum, cerium, praseodymium, and neodymium were more precisely defined by potentiometric titrations of 0.01 molar solutions of aspartic acid with 0.1 N KOH in the presence and absence of rare earth ions. The pH value was measured at 25°C by an JПП-5 (LP-5) potentiometer and a glass electrode. Two series of titrations were conducted with a component ratio of $C_{H_2A} : C_{M^{3+}} = 1 : 1$ and $2 : 1$

(H_2A = aspartic acid). The potentiometric titration curves are shown in Figs. 1 and 2. The stability of complex compounds of lanthanum, cerium, praseodymium, and neodymium with aspartic acid increases in the following

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Stability of Complex Compounds of Lanthanum,
Cerium, Praseodymium, and Neodymium With
Aspartic Acid

S/078/61/006/001/005/019
B017/B054

order: $\text{La} < \text{Ce} < \text{Pr} < \text{Nd}$. The authors conclude from their results that the interaction between La^{3+} , Ce^{3+} , Pr^{3+} , Nd^{3+} and aspartic acid is not restricted to the formation of MA^+ and MA_2^- complexes. There are 3 figures, 1 table, and 9 references: 2 Soviet, 2 US, 2 British, 2 Danish, and 1 Swiss.

SUBMITTED: September 2, 1959

Card 2/2

S/200/62/000/012/003/005
D204/D307

AUTHORS:

Batyayev, I.M. and Larionov, S.V.

TITLE:

Stability of the complexes of lanthanum, praseodymium and neodymium with glycol

PERIODICAL:

Akademiya nauk SSSR. Sibirskoye otdeleniye. Izvestiya, no. 12, 1962, 69-73

TEXT:

The present paper is concerned with the study of the stability of complexes of La, Pr, and Nd with glycol, and of Nd with α -alanine and serine, since such work may be of importance in the study of the complexing of lanthanons with polypeptides. The stability constants were determined by potentiometric titrations, at $25 \pm 0.05^\circ\text{C}$, of the above amino acids with 0.1 N KOH, in the presence and absence of the ions of La, Pr, Nd. The acid:metal ratio was 1:1 or 3:1. For a titration, 100 ml of 0.001 M amino acid were placed in the cell, followed by 0.3 to 1.7 ml of neutral MgCl_2 (M = lanthanon) to an ionic strength of 0.1. The latter value did not rise by more than 5% during experiment. Logarithms of the 1st stab-

Card 1/2

Stability of the complexes ...

S/200/62/000/012/003/005
D204/D307

Stability constants (χ_1) were found to be respectively 4.18, 4.66 and 4.74 for La, Pr and Nd complexes with glycolol. A value of 4.3 was also found for $\log \chi_2$ for the glycolol complex of Nd. For complexes of Nd with α -alanine and serine, $\log \chi_1$ was respectively 5.04 and 4.52. Comparison of these results with earlier work (Zh. neorg. khim., VI, 153 (1961); Izv. Sib. otd. AN SSSR, no. 2, 113 (1962)) showed that the stability of the complexes of La, Pr and Nd with aspartic acid is higher than the stability of the complexes of the same elements with glutamic acid or glycolol. There are 2 figures and 3 tables.

ASSOCIATION:

Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, Novosibirsk (Institute of Inorganic Chemistry of the Siberian Branch of AS USSR, Novosibirsk)

SUBMITTED:

January 20, 1962

Card 2/2

BATYAYEV, I.M.; LARIONOV, S.V.

Stability of complex compounds of lanthanum, cerium,
praseodymium and neodymium with glutamic acid. Izv. Sib. otd.
AN SSSR no.2:113-115 '62. (MIRA 16:10)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

LARIONOV, S.V.; SHUL'MAN, V.M.; PODOL'SKAYA, L.A.

Complex formation of nickel with o-thiosalicylic acid. Zhur.
neorg. khim. 9 no.10:2333-2338 O '64.

(MIRA 17:12)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSR.

SHUL'MAN, V.M.; LARIONOV, S.V.; KRAMAREVA, T.V.; YEFREMOVA, T.D.

Oxido-reduction potentials of the system thiourea - formamidine disulfide in some mixed solvents. Izv. AN SSSR. Ser. khim. no.7:1257.
1258 '65.
(MIRA 18:7)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.

LARIONOV, V., inzh.

New marine evaporator systems. Mor. flot 22 no.10:43-44 0 '62.
(MIRA 15:10)

(Feed water purification—Equipment and supplies)

LARIONOV, V., inzh.

International survey of chemistry. Mor. flot. 25 no. 12:
35-36 D '65. (MIRA 18:12)

LARIONOV, V., inzh.

Ships on an air cushion. Voer. znan. 38 no.9:26 S '62.

(Ground-effect machines) (Motorboats)

(MIRA 15:9)

LARIONOV, V., inzh.

Fenders for ships and landing structures. Rech. transp. 24 no.11:
51-52 '65. (MIRA 19:1)

L 16905-65 EWT(m)/EWA(d)/ENP(t)/ENP(b) IJP(c)/ASD(f)-2/SSD/ASD(m)-3/AFTC(p)
ACCESSION NR: AP4049180 MJW/JD/WB S/0314/64/000/005/0028/0029

AUTHOR: Pul'tsin, N. M. (Candidate of technical sciences); Larionov, V. A. (Engineer)

TITLE: Investigation of titanium-alloy strength in an aggressive medium

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 5, 1964, 28-29

TOPIC TAGS: titanium, titanium alloy, alloy property, VT14 alloy, AT8 alloy, corrosion, stress corrosion, sulfuric acid

ABSTRACT: Tests have been conducted to determine the strength of the VT14 and AT8 titanium alloys in an aggressive medium and to investigate the effect of the surface layer formed as a result of gas absorption during annealing at 880C for 0.5 to 2 hr. Alloys were stressed to 92.5, 95, or 97.5% of their tensile strength, in 20% sulfuric acid. AT8 alloy was found to be more resistant to the combined effect of stress and corrosion. Under a stress of 95% of the tensile strength, VT14 alloy failed in 30 min and AT8 alloy failed

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L 16905-65

ACCESSION NR: AP4049180

in 3 hr 15 min. Under a stress of 92.5% of the tensile strength, neither alloy failed after 24 hr. The surface layer formed under the effect of heat treatment increases the strength of both alloys in the aggressive medium. In tests under a stress of 95% of the tensile strength, a layer 0.105 mm thick increased the life of VT14 alloy to 1 hr 15 min, and a layer 0.11 mm thick increased the life of AT8 alloy to 22 hr. The greater strength of the AT8 alloy can be explained by its higher aluminum content. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: HM

NO REF SOV: 000

OTHER: 000

ATD PRESS: 3150

Card 2/2

LARIONOV, V.A.

Material and technical security in assembling and in special work.
Nov. tekhn. i pered. op. v stroi. 20 no. 7:31-32 J1 '58. (MIRA 11:8)

1. Glavnyy inzh. Glavsnaba Ministroya RSFSR.
(Building--Contracts and specifications)

LARIONOV, V.A.

Abad'sya mek SSSR. Laboratoriya aerofotodoy
 87/952
 807/7-4-4
 2nd, 3rd 6: Materialy VII Vsesoyuznogo nauchnoy metodicheskogo soveshchaniya
 po aerofotodoy 25 noyabrya - 1 dekabrya 1956 g. (Materials of the
 7th All-Union Interdepartmental Conference on Aerial Surveying, 25
 November-1 December 1956) Moscow, Gosgeolizdat, 1959. 300 p.
 5,000 copies printed.

Ed. of Publishing House: V. G. Filatov; Tech. Ed.: O. A. Gurova;
 Editorial Commission: N. G. Kall', Corresponding Member, Academy of
 Sciences USSR; A. A. Logachev, V. S. Khrushchinskii (Resp. Ed.),
 and N. S. Bobolov.

PURPOSE: This publication is intended for photogrammetrists, geologists,
 engineers, and other scientific and technical personnel concerned
 with aerial photography.

CONTENTS: This issue of the Transactions of the Laboratory of Aerial
 Survey Methods contains the second part of materials presented at
 the 7th All-Union Interdepartmental Conference on Aerial Surveying
 which took place in Leningrad, November 25 through December 1, 1956.
 Articles treat problems dealing with the expansion and application
 of aerial survey methods in geological, geomorphological, and geo-
 physical investigations. Special attention is directed to aerial
 survey methods in geological and geomorphological mapping and geo-
 physical work under different conditions. The techniques of joint
 airborne magnetic prospecting and aerial photography are described.
 Reference accompany individual articles.

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Smirnov, O. S. [Ministerstvo geologii i gornyykh rud SSSR - Ministry of Geology and Minerals Conservation of the USSR]. Fundamental Principles of the Theory and Methodology of Aerial Radiostatic Surveying and Prospecting	246

LARIONOV, V.A.

Vertical magnetic logging method. Geol. i geofiz. no.1:107-114
'60. (MIRA 13:9)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.
(Magnetic prospecting)

LARIONOV, V.A.

Calculation of the magnetic field in the vertical plane for certain simple bodies. Trudy Inst.geol. i geofiz. Sib.otd. AN SSSR no.1:95-114, '60.

(MIRA 15:2)

(Siberia, Western—Magnetic prospecting)

LARIONOV, V. A.

Cand Geol-Min Sci - (diss) "Study of the spatial distribution of magnetic field in surveys and explorations for iron-ore deposits." Novosibirsk, 1961. 19 pp; (Academy of Sciences USSR, Siberian Division, of the Joint Academic Council for Geology-Mineralogy, Geophysics, and Geography); 150 copies; price not given; list of author's works on pp 18-19 (10 entries); (KL, 5-61 sup, 180)

LARIONOV, V.A.

Field determination of residual and induced magnetization ratio.
Geol. i' geofiz. no.4:107-109 '61. (MIRA 14:5)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,
Novosibirsk.
(Magnetism, Terrestrial)

LARIONOV, V.A.

Use of specific points in anomalous profiles Z_a for interpreting
vertical measurements of the magnetic field. Geol.i geofiz. no.7:
96-98 '61. (MIRA 14:9)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

(Magnetism, Terrestrial)

LARIONOV, V.A.

Charts of theoretical curves for the interpretation of magnetic
field measurements at different heights. Trudy Inst. geol. i
geofiz. Sib. otd. AN SSSR no.11:99-108 '61. (MIRA 15:2)
(Magnetic prospecting)

S/169/62/000/007/062/149
D228/D307

AUTHOR: Larionov, V. A.

TITLE: Problem of dividing magnetic anomalies into ore and barren ones when seeking and exploring iron ore deposits of the Gornoshorskikh type (Discourse theses)

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 7, 1962, 30, abstract 7A196 (V sb. Sostoyaniye i perspektivy razvitiya geofiz. metodov poiskov i razvedki polezn. iskopayemykh, M., Gostoptekhizdat, 1961, 526-527)

TEXT: It was established that the ore complexes of Gornaya Shoriya possess simultaneously heightened magnetic and density properties, the magnetic ores being characterized by the maximum values of the parameters indicated. The execution of vertical plane surveying acquires great significance for determining the positions of the disturbing bodies, with the aim of establishing their ore content. For this case the author developed methods for determining the depth and shape of anomalous masses. [Abstracter's note: Complete translation.] ✓

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